

CLASS B AIS REPORTS

MESSAGE 18: STANDARD CLASS B EQUIPMENT POSITION REPORT

Parameter	Bits	Description
Message ID	6	Identifier for Message 18; always 18
Repeat indicator	2	Used by the repeater to indicate how many times a message has been repeated; 0-3; 0 = default; 3 = do not repeat anymore; should be 0 for "CS" transmissions
User ID	30	MMSI number
Spare	8	Not used. Should be set to zero. Reserved for future use
SOG	10	Speed over ground in 1/10 knot steps (0-102.2 knots) 1 023 = not available, 1 022 = 102.2 knots or higher
Position accuracy	1	1 = high (≤ 10 m) 0 = low (> 10 m) 0 = default
Longitude	28	Longitude in 1/10 000 min ($\pm 180^\circ$, East = positive (as per 2's complement)), West = negative (as per 2's complement); 181° (6791AC0h) = not available = default
Latitude	27	Latitude in 1/10 000 min (90° , North = positive (as per 2's complement)), South = negative (as per 2's complement); 91° = (3412140h) = not available = default
COG	12	Course over ground in 1/10° (0-3 599). 3 600 (E10h) = not available = default; 3 601-4 095 should not be used
True heading	9	Degrees (0-359) (511 indicates not available = default)
Time stamp	6	UTC second when the report was generated by the EPFS (0-59 or 60 if time stamp is not available, which should also be the default value or 61 if positioning system is in manual input mode or 62 if electronic position fixing system operates in estimated (dead reckoning) mode or 63 if the positioning system is inoperative) 61, 62, 63 are not used by "CS" AIS
Spare	2	Not used. Should be set to zero. Reserved for future use
Class B unit flag	1	0 = Class B SOTDMA unit 1 = Class B "CS" unit
Class B display flag	1	0 = No display available; not capable of displaying Message 12 and 14 1 = Equipped with integrated display displaying Message 12 and 14
Class B DSC flag	1	0 = Not equipped with DSC function 1 = Equipped with DSC function (dedicated or time-shared)
Class B band flag	1	0 = Capable of operating over the upper 525 kHz band of the marine band 1 = Capable of operating over the whole marine band (irrelevant if "Class B Message 22 flag" is 0)
Class B Message 22 flag	1	0 = No frequency management via Message 22, operating on AIS1, AIS2 only 1 = Frequency management via Message 22
Mode flag	1	0 = Station operating in autonomous and continuous mode = default 1 = Station operating in assigned mode
RAIM-flag	1	RAIM (Receiver autonomous integrity monitoring) flag of electronic position fixing device; 0 = RAIM not in use = default; 1 = RAIM in use
Communication state selector flag	1	0 = SOTDMA communication state follows 1 = ITDMA communication state follows (always "1" for Class-B "CS")
Communication state	19	SOTDMA communication state. Because Class B "CS" does not use any Communication State information, this field shall be filled with the following value: 1100000000000000110.
Number of bits	168	Occupies one slot

(Source : International Telecommunications Union Recommendation *ITU-R M.1371-5*)

** Note: For future equipment: this message is not needed and should not be used. All content is covered by Message 18, Message 24A and 24B. For legacy equipment: this message should be used by Class B shipborne mobile equipment.*

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Equipment that supports Message 24 part A shall transmit once every 6 min alternating between channels.

Message 24 Part A may be used by any AIS station to associate a MMSI with a name.

Message 24 Part A and Part B should be transmitted once every 6 min by Class B “CS” and Class B “SO” shipborne mobile equipment. The message consists of two parts. Message 24B should be transmitted within 1 min following Message 24A.

When the parameter value of dimension of ship/reference for position or type of electronic position fixing device is changed, Class-B "CS" and Class-B "SO" should transmit Message 24B.

When requesting the transmission of a Message 24 from a Class B "CS" or Class B "SO", the AIS station should respond with part A and part B.

When requesting the transmission of a Message 24 from a Class A, the AIS station should respond with part B, which may contain the vendor ID only.

Parameter	Bits	Description
Message ID	6	Identifier for Message 24; always 24
Repeat indicator	2	Used by the repeater to indicate how many times a message has been repeated. 0 = default; 3 = do not repeat any more
User ID	30	MMSI number
Part number	2	Identifier for the message part number; always 0 for Part A
Name	120	Name of the MMSI-registered vessel. Maximum 20 characters 6-bit ASCII, @@@@ = not available = default For SAR aircraft, it should be set to "SAR AIRCRAFT NNNNNNN" where NNNNNNN equals the aircraft registration number
Number of bits	160	Occupies one-time period

Parameter	Bits	Description
Message ID	6	Identifier for Message 24; always 24
Repeat indicator	2	Used by the repeater to indicate how many times a message has been repeated. 0 = default; 3 = do not repeat any more
User ID	30	MMSI number
Part number	2	Identifier for the message part number; always 1 for Part B
Type of ship and cargo type	8	0 = not available or no ship = default 1-99 = as defined in § 3.3.2 100-199 = reserved, for regional use 200-255 = reserved, for future use Not applicable to SAR aircraft
Vendor ID	42	Unique identification of the Unit by a number as defined by the manufacturer (option; "#####" = not available = default) See vendor Identification field table below
Call sign	42	Call sign of the MMSI-registered vessel. 7 X 6 bit ASCII characters, "#####" = not available = default Craft associated with a parent vessel should use "A" followed by the last 6 digits of the MMSI of the parent vessel. Examples of these craft include towed vessels, rescue boats, tenders, lifeboats and life rafts
Dimension of ship/reference for position.	30	Dimensions of ship in meters and reference point for reported position. For SAR aircraft, the use of this field may be decided by the responsible administration. If used it should indicate the maximum dimensions of the craft. As default should A = B = C = D be set to "0".
Type of electronic position fixing device	4	0 = Undefined (default); 1 = GPS, 2 = GLONASS, 3 = combined GPS/GLONASS, 4 = Loran-C, 5 = Chayka, 6 = integrated navigation system, 7 = surveyed; 8 = Galileo, 9-14 = not used, 15 = internal GNSS
Spare	2	
Number of bits	168	Occupies one-time period

VENDOR IDENTIFICATION FIELD

Bit	Information	Description
(MSB) 41 24 (18 bits)	Manufacturer's ID	The Manufacturer's ID bits indicate the manufacture's mnemonic code consisting of three 6 bit ASCII characters. NMEA mnemonic manufacturer codes should be used for Message 24B Manufacturer ID.
23 20 (4 bits)	Unit Model Code	The Unit Model Code bits indicate the binary coded series number of the model. The first model of the manufacture uses "1" and the number is incremented at the release of a new model. The code reverts to "1" after reaching to "15". The "0" is not used
19 0 (LSB) (20 bits)	Unit Serial Number	The Unit Serial Number bits indicate the manufacture traceable serial number. When the serial number is composed of numeric only, the binary coding should be used. If it includes figure(s), the manufacture can define the coding method. The coding method should be mentioned in the manual